GOVERNMENT OF INDIA
OCEAN DEVELOPMENT
LOK SABHA

UNSTARRED QUESTION NO:2450
ANSWERED ON:19.03.2002
RECOMMENDATIONS OF COMMITTEE ON POLYMETALLIC NODULES
PRABHUNATH SINGH

Will the Minister of OCEAN DEVELOPMENT be pleased to state:

r to the reply given to Unstarred Question No.4331 dated December, 18,2001 regarding Expert Committee on Polymetallic Nodules and state:

(a) the details of recommendations made by the High Power ExpertCommittee to assess the Polymetallic Nodule Programme (PMN) upon which the Department has taken necessary action;

(b) whether the Government have achieved the desired results; and

(c) if so, the details thereof?

Answer

THE MINISTER OF HUMAN RESOURCE DEVELOPMENT, MINISTER OF SCIENCE & TECHNOLOGY AND MINIS OCEAN DEVELOPMENT (DR. MURLI MANOHAR JOSHI)

(a) Pursuant to the recommendations of the High Power Expert Committee,following activities were undertaken and were implemented during the 9th plan:

i. Survey & Exploration;
ii. Technology Development (Mining);
iii. Technology Development (Extractive Metallurgy);
iv. Environmental Impact Assessment Study

(b) & (c) Yes, Sir. The details of the achievements in respect of various components are as below:

Survey & Exploration:

India was allotted an area of 1,50,000 sq. km. in Central Indian OceanBasin under United Nations Convention on the Law of the Sea (UNCLOS) by the United Nations. As a part of firmly establishing the resource potential and pattern of abundance, sampling has been undertaken on progressive closer grid.

Survey and exploration has been initiated and undertaken in selected blocks at 5 km. grid for validating the assessment and updating the quality and abundance.

India, as a pioneer investor, has to relinquish 50% of the area in phases. India has already relinquished 30% in stages. Relinquishment of final 20% of the area was recommended on the basis of the available data.

Technology Development (Mining):

A major project towards development of technology for mining nodules was taken up for fabrication of a shallow sand mining system. A crawler designed to operate on sandy seabed was furbished with appropriate pumping, cutting device, manipulator and control systems. The system successfully pumped clay slurry from a depth of 410 m. The design of an integrated underwater nodule mining system for upto 6,000 m has been prepared and shall be developed during the 10th plan.

A Remotely Operated Vehicle capable of operating at 250 m depthdesigned and fabricated by Central Mechanical Engineering Research Institute, underwent a series of tests. The system was eventually successfully tested at 210 m depth for its designed operations i.e., observation of ocean parameters, photography, maneuverability of movement in the water column.

Technology Development (Metallurgy):

A process (ammoniacal SO2 leach route) has been taken up for upscaling for extraction of metal values from nodules.

A semi-continuous demonstration pilot plant of 500 kg. per day capacity for extraction of metals from nodules has been set up as a

part of technology development activity for metallurgy. The plant has been set up at Hindustan ZincLtd, Udaipur which is responsible for its operation and maintenance. The demonstration pilot plant trial runs will generate process parameters for evaluation, optimization and economic studies of the process route.

Environmental Impact Assessment (EIA) study:

A comprehensive EIA study for potential exploration of nodules has beeninitiated in the pioneer area. After obtaining baseline environmental and oceanographic data on the seabed and water column, benthic disturbance simulating mining of nodules was done using specialised equipment. The pattern of restoration in the same vicinity both immediately after the disturbance and over a period of time has been studied. Monitoring of the parameters in the identified test sites in the Central Indian Ocean Basin is continued.